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MINISTRY OF AGRICULTURE

MONTHLY REPORT

JULY, 1937

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GOVERNMENT OF NORTHERN IRELAND

MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

JULY, 1937.

The very heavy rains which have fallen recently will doubtless prove beneficial to growing crops, especially turnips, and grass, but drier and warmer weather would have been appreciated for the harvesting of hay which, although commencing earlier than usual this year, has been retarded by the unsettled weather of late. Since fine weather at harvesting is a prime necessity for ensuring the saving of good crops of hay, it is to be hoped that more genial, summer-like conditions will arrive soon to facilitate this work. At present there is every indication that the hay crop will be a good one this year.

Besides interfering with the progress of hay making, the existing weather conditions are greatly conducive to the appearance and rapid spread of blight disease in potatoes, and farmers who have not already done so, should take immediate steps to protect their crops by spraying. Blight has already appeared in some fields of potatoes, and as the disease cannot be cured it is of the utmost importance to prevent its appearance. Spraying in good time is the preventive.

In view of the recent announcement regarding the assistance to be afforded to farmers in order that they may improve the fertility of their soils by the use of lime and basic slag, it might be mentioned that farmers should not neglect the opportunity to note from the present state of the pastures and other growing crops where lime and fertilisers could be applied with advantage.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st JULY, 1937.

The month of June opened with occasional heavy showers and bright intervals and during the second and third weeks drier and slightly warmer conditions prevailed. Later the weather became unsettled again with lower temperatures, and conditions at the close were rather wet and cool.

There were good opportunities for the advancement of seasonal farm work during last month and in most areas the arrears appear to have been overtaken early. The work of planting potatoes and of sowing turnips was completed under satisfactory conditions and the after cultivation of the crops was attended to, whilst the cutting and saving of the hay crop was begun in a number of districts. The early rains accompanied by warm temperatures proved very beneficial to the growing crops in that they promoted rapid growth, especially in the case of potatoes and swedes, and the countryside presents a very promising spectacle at the moment. Some grain and flax crops sown on light soils were, however, showing signs of requiring more moisture before the recent rains arrived. Similarly, whilst pastures are looking well as a general rule and providing plenty of keep, the dry weather in the middle of June, together with rather low ground temperatures on some nights, checked growth in exposed areas and on light soils. The position of keep is, however, satisfactory. The remaining light stocks of home-grown food stuffs continued sufficient for general requirements. Purchased food stuffs have been more plentiful at about late rates, but their use has been limited to pig feeding, although dairy cattle have been given fair quantities of concentrated foods, and in some cases forward stores being fattened on grass have been given additional food in the shape of cakes or meals.

Live stock, as a general rule, have been maintained in good average condition and the bill of health is normal, although there have been a few cases of "red water" among store cattle, whilst maggots have proved troublesome to sheep owners.

THE CROPS.

WHEAT.—Winter and spring sown wheat is looking fairly well and, in fact, more promising than at this time last year, but there are some fields

where the brairds are thin and patchy and this remark applies to both winter and spring varieties of wheat. The crop, on the whole, made a good growth during the past month.

OATS.—This crop also made very good progress during June; although backward on account of a late sowing season, it promises well. On some farms where the soil is light the crop is rather short but, on the other hand, on some heavy clay lands the brairds are inclined to be rank and may lodge easily with heavy rains. Serious complaints of attacks by the leather jacket grub and wireworm have been received from several districts and the damage caused is stated to be fairly severe.

Diminishing lots of home-grown white oats were marketed last month at slightly dearer rates, ranging from 8/- to 10/-, and averaging 8/7 per cwt.

BARLEY.—Most of the growing crops have shown a marked improvement in condition. Despite the lateness of the season and of the fact that in some areas late sowings were done when soil conditions were unfavourable and that low ground temperatures were experienced immediately following, the results, on the whole, may be fairly satisfactory.

FLAX.—The reports to hand in regard to this crop vary somewhat, but, in general, it is agreed that the crop made a promising start, although in many districts the growth of the brairds was not maintained, especially on light soil areas where dry and cool weather retarded normal development. None the less, there are many promising crops, but unless additional rain and heat arrive soon to stimulate more vigorous growth, the yields will be lower than last year. A second growth has been reported from some districts, thus illustrating the unsettled nature of the weather and temperatures.

POTATOES.—The planting of the main crop varieties was completed last month under ideal conditions. This work, which has been greatly delayed by bad weather this year, was, therefore, eventually finished satisfactorily and since the crops have made remarkably good growth the general position of the crop is now fairly normal for the time of year. Some plants are, however, a little backward and the "tops", in some instances, are looking smaller than usual. Wireworm has attacked some fields and there have also been a few isolated outbreaks of blight. Spraying, however is now being done as a precautionary measure following the recent rains and heat which are conducive to the rapid spread of the disease. There are plenty of the necessary spraying materials available this year, although copper sulphate is, perhaps, a little more expensive than usual. The digging of this season's early varieties has been in progress in some districts for some time now, but this work

is not yet general. So far, the yields of good quality tubers have been of fair to average dimensions.

First arrivals of new season's early varieties at Belfast markets opened at 32/- to 48/-, but the increasing offerings later declined rapidly in price and averaged 11/9 per cwt. at the commencement of July.

Supplies of the old crop kept well notwithstanding the severe winter but the stocks of fair quality edible ware potatoes are now almost exhausted. At last month's markets recent satisfactory prices were well maintained for all classes at around 5/4¾ per cwt.

Considerably decreased quantities were shipped during June as compared with a month ago and with the returns for the corresponding month of 1936 and the season may now be stated to have practically terminated.

The following were last month's weekly shipments as compared with 1936:

1937		1936	
Week ending	Tons	Week ending	tons
June 5th	.. 2,521	June 6th	.. 5,639
12th	.. 2,147	13th	.. 7,859
19th	.. 1,172	20th	.. 5,853
26th	.. 674	27th	.. 2,420

Prices towards the close of the season remained firm, and for the week ended 19th June, 1937, were as follow:—

	Bagged.	Loose.
Up-to-Date (Red Soil)	£5- 0-0	—
Arran Banner	£4-10-0	—
Arran Victory	£4- 5-0 to £5- 0-0	£4-0-0 to £4- 5-0
Kerr's Pink	£4-15-0	£4-0-0 to £4-10-0

MANGELS.—Sowings were completed early last month and as a general rule the soil conditions remained satisfactory throughout for this work. The crop brairded well and assisted by the rains the brairds have made good growth.

TURNIPS.—Most of the sowings were done during May and the remainder were completed early last month under favourable weather and soil conditions. Brairds appeared strong and healthy and are making good growth and the work of singling is proceeding. The turnip flea beetle has attacked a few fields but no appreciable damage has been done.

HAY.—The growing crops made a very marked improvement in condition during the past two months and, at present, they are showing up extremely well. Cutting commenced in a few districts during the second week of June

and this work is now, more or less, general. A fair proporion of hay was saved under good conditions and is now in ricks. Very good accounts are to hand regarding the prospects of first crop hay but upland and meadow hay are also expected to give yields well up to the average.

LIVE STOCK.

CATTLE.—All classes of stores are doing well on grass although in a few districts where the growth of pastures was checked by cool weather and the lack of sufficient moisture, cattle made little improvement. It is estimated that a smaller number of cattle are being fattened on grass this year on account of the scarcity and high prices of good stores. Dairy cattle have improved in condition and the health of the herds is normal. It is reckoned that the milk yield has increased and is now at the normal high level for the time of the year. There were larger offerings of cattle at fairs last month than during May, but supplies continued small for the time of year. The demand remained good for best quality stores and fats, at almost late rates. Good young dairy cows likely to prove good milkers also sold readily at firm prices for shipment.

SHEEP.—The flocks have been maintained in a normal healthy condition. This season's crop of lambs, which was about average in dimensions, made a really good thrive of late. It is understood, however, that the maggot fly has proved troublesome among some flocks and attacks of "orf" have also been reported.

The increased offerings of fat lambs exposed for sale at fairs last month met a keen demand at recent high prices. There were also fair numbers of ewes with lambs at foot and these sold well at late rates. Trade for other descriptions was, however, quiet.

WOOL.—The clip has given fairly satisfactory results both as regards quality and quantity and it is estimated that the total amount of wool available this season will be of moderately good dimensions. Trade for the increasing offerings at markets ruled keen and prices averaged 1/0½ per lb. for long unwashed wool, and 11d. for mountain unwashed wool. These figures record an appreciable advance over those for the corresponding period of last year which were:—long unwashed wool, 6½d. per lb.; mountain unwashed wool, 5½d. per lb.

PIGS.—As a general rule, supplies of young pigs offered at fairs last month were much larger than of late and fairly good clearances were effected at steady prices. Small supplies of breeding sows of fair to good quality were a quiet trade at prices ranging from £5 to £9 each.

HORSES.—A keen demand continued for good farm horses (4 and 5 year olds) at prices ranging from £45 to £60 each, whilst good young light horses and those of the draught type are also meeting a strong enquiry at these prices. Useful farm animals were obtainable at from £25 to £45 each. The continued steady improvement in the horse trade has, it is understood, encouraged the production of greater numbers of foals this season.

MILK.—The milk yield has shown a considerable improvement in many districts and has now reached the normal high level for the season of the year. Creameries are, therefore, finding plentiful supplies available at prices ranging from 4d to 5d per gallon for milk delivered, the separated milk being returned to the farm.

The rate of equalisation payments for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes was determined at 0.48d. per gallon for the month of May, 1937, in accordance with the Milk and Milk Products Act (Northern Ireland), 1934.

THE COST OF LIVING INDEX FIGURE.

At 1st June, 1937, the cost of living index figure was 52, or the same as that for the previous month. The figure at 1st June, 1936, was 44.

THE MARKETS DURING JUNE.

In the vegetable markets last month there was a general scarcity of home-grown vegetables, pamphrey and leeks being the only vegetables in larger supply than in May, and all other vegetables much less plentiful. Pamphrey cheapened by 1d. to 1/- per dozen, parsnips by 1/8 to 4/6 per cwt., and garden turnips by 2d. to 1/1 per cwt., whilst cauliflowers rose by 1/1½d. to 3/- per dozen, leeks by 3d. to 6¾d. per bunch, parsley by 2¾d. to 6¼d. per bunch, and carrots by 8d. to 7/- per cwt. Farmers' butter recorded a fair

increase in supply compared with a month ago. Print butter was a ½d. cheaper at 1/1½d. per lb., but lump was unaltered in price on the month at 11¼d. per lb. There was a slight decline in supplies of hen eggs during June, but duck eggs were more plentiful. The weaker tendency noticeable in the prices of hen eggs during May was checked at the beginning of June, and prices improved on the month by 1½d. to 6¾d. per lb. Duck eggs also rose in price by 1/0½d. to 7/5d. per 120. Poultry were more numerous than in May, and while hens and chickens were each 1d. and 1¾d. cheaper on the month at 1/7¾d. and 2/5¾d. each respectively, ducks were ½d. dearer at 2/3d. each.

THE FRUIT CROP PROSPECTS, 1937.

The very wet weather conditions of the past winter considerably hampered fruit growers in their efforts to cope with the necessary seasonal work in their orchards and plantations, such as cultivation, planting, pruning and spraying. The last mentioned appears to have been somewhat restricted in scope on this account, and also in those orchards whose owners, discouraged by the low prices ruling for last season's apple crop, neglected to take advantage of favourable opportunities to perform this most important work.

These cold and damp conditions, which continued up to the month of April also retarded growth, and resulted in a rather late season. The month of May, however, saw a profusion of bloom in all orchards which has rarely been surpassed in splendour, and the fine weather prevailing then practically assured a good set of fruit, especially on apple and plum trees. The general absence of frosts at the critical stage of growth also was much appreciated, and all tree fruits, with the exception of pears, and all the principal bush fruits, were in a promising condition at the end of May. During the past month the weather continued generally favourable, the moister and slightly warmer conditions helping the young fruits to develop and furthering the possibilities of good average yields of nearly all classes of fruit being obtained.

The table on page 120 shows in detail the position of the principal fruits grown in Northern Ireland compared with a year ago.

County.	APPLES.				OTHER FRUIT TREES.				BUSH FRUITS.			
	Cooking varieties.			Dessert Varieties	Damsons	Plums	Pears	Cherries	Straw-berries	Rasp-berries	Black-currants	Goose-berries
	Bramleys Seedling	Grenadier	Others									
Antrim ..	V.G. (F. to A.)	F. to G. (F.)	F. to G. (A.)	G. (A. to G.)	G. (F.)	G. (F. to A.)	A. (A. to G.)	G. (G.)	G. (A. to G.)	G. to V.G. (A.)	G. to V.G. (A.)	G. to V.G. (A.)
Armagh ..	G. (F.)	F. to G. (F. to G.)	F. to G. (A.)	G. (A.)	F. to A. (A. to G.)	G. (F. to A.)	P. (A. to G.)	G. (A.)	F. (A.)	G. to V.G. (F.)	G. to V.G. (F. to A.)	G. to V.G. (F.)
Down ..	V.G. (F.)	G. (F.)	G. (F. to A.)	G. (F.)	A. (A.)	G. (A.)	A. (A.)	G. (F. to A.)	A. (G.)	G. to V.G. (G.)	G. to V.G. (F.)	G. (F. to A.)
Fermanagh	G. (G.)	F. to G. (F.)	F. to G. (A.)	G. (G.)	F. to G. (G.)	A. (G.)	P. (A. to G.)	G. (A. to G.)	G. (G.)	G. (G. to V.G.)	G. to V.G. (F.)	G. to V.G. (G.)
Londonderry	G. (F.)	F. to G. (F.)	G. (A.)	G. (A.)	F. (F.)	F. (A.)	P. (A. to G.)	F. (G.)	G. (A.)	G. (G.)	G. (A.)	G. (A.)
Tyrone ..	V.G. (F. to G.)	G. (A.)	F. (F. to G.)	G. (A.)	P. to F. (G.)	F. (G.)	F. (G.)	G. (G.)	G. (A.)	G. (G.)	G. to V.G. (F.)	G. to V.G. (A.)
Northern Ireland ...	V.G. (F. to G.)	A. to G. (F. to G.)	A. (A.)	G. (A.)	F. to A. (A.)	F. to G. (A.)	F. (A. to G.)	G. (A. to G.)	G. (A.)	G. to V.G. (G.)	G. to V.G. (F.)	G. to V.G. (A.)

Abbreviations :—V.G.—Very Good. G.—Good. A.—Average. F.—Fair. P.—Poor. V.P.—Very Poor.
The letters in brackets relate to the position of last years crop at the corresponding date.

TREE FRUITS.

Apples.—It is estimated from the reports received from representative sources that the apple crop this season will be a good one, provided growing conditions remain favourable until harvesting time. As already stated, there was an exceptionally heavy bloom on most trees and quite a good set of fruitlets is reported. Insect pests and the rather cool and dry conditions during May caused some damage, but this was not above the ordinary, and in fact would seem to be generally of little account this year when the set of fruit is so heavy in some areas as to indicate the necessity of drastic thinning out. The principal variety of apples, Bramley's Seedling, appears to have done remarkably well in all districts, and a very good crop is expected. The average yield should exceed that for the past two seasons, if all goes well until the time of pulling. The other important cooking variety, Grenadier, will, it is reckoned, give slightly better yields than a year ago, and the remaining varieties in this class will probably produce average crops. The crops of dessert varieties of apples are promising, and the yields will, in all probability, be better than last year.

The accounts of the prospects of other tree fruits are also fairly encouraging although, perhaps, generally a little less satisfactory than at the corresponding date last year. Cherries promise to be a better crop, and plums may also yield more fruit than last year, while damsons may reach average dimensions; but pears have been disappointing in most districts, and a fair yield is all that can be expected at the best.

BUSH FRUITS.

Contrary to general expectations, following the very cold and damp weather of the winter and spring months, the strawberry plantations showed much promise in June, and the improvement in growth continued with the moister weather of last month. The absence of late frosts atoned for previous unfavourable weather conditions, and average yields should be obtained in most plantations this year.

Of the other principal soft fruits, the crops of raspberries, blackcurrants, and gooseberries are promising, and the fruits have swollen out well of late. Very good yields are anticipated.

INSECT AND FUNGOID PESTS.

Since winter spraying with tar oil distillates was done on a rather less extensive scale, by reason of continuous wet weather, and in consequence of the intentional neglect of some growers following a year when prices were none too remunerative, it was to be expected that pests would be more prevalent this year. Unfortunately this has proved true to some extent and aphis is more common than usual, having multiplied considerably in numbers during the dry weather of May. Apple sucker, apple capsid bugs, and red spider, are also giving trouble in unsprayed orchards.

Summer spraying where done conscientiously and in good time, has been efficacious in keeping down Apple Scab.

On the question of spraying according to schedule, the Ministry again takes this opportunity of stressing the importance of this work. Whilst there is every good reason for believing that most fruit growers fully realise that in spraying their orchards systematically they are acting well in their own interests, it is felt that by constantly drawing attention to this orchard routine those owners who are new to the business, or are indifferent, may be brought into line and thus assist with the others in effecting a general raising of the standard of the fruit grown in Northern Ireland.

For the benefit of those growers who are not already aware of the services provided in their interests it may be added that, in addition to the employment of Horticultural Instructors in each county by the County Committees of Agriculture to give advice to growers, the Ministry's knowledge on all points is always available for the asking. Furthermore, the following publications on the production and marketing of fruit are issued free of charge to applicants who should write for them to the Secretary, Ministry of Agriculture, Stormont, Belfast:—

Leaflet No. 6—The Packing of Apples in Standard Boxes.
" " 9—The Renovation of Orchards.
" " 10—Fruit Tree Pests—Capsid Bugs.
" " 11— " " " —Aphides and Apple Sucker.
" " 12— " " " —Caterpillars.
" " 15—Suitable Varieties of Fruit.
" " 17—Home Bottling of Fruit and Vegetables.
" " 33—Spraying Calendar for Apple Orchards.
" " 34—The Pruning of Apple Trees.
" " 49—American Gooseberry Mildew.
" " 65—The Packing of Apples in Barrels.
" " 68—The Cultivation of Strawberries.
" " 71—The Cultivation of Raspberries.
" " 79—The Picking and Storing of Apples.
Guide to the Marketing of Fruit Act (Northern Ireland), 1931.

To those growers and instructors who so kindly assisted in furnishing reports on their crops for this review, the Ministry acknowledges its grateful appreciation.

According to the report on the condition of horticultural crops in England and Wales on the 1st July, 1937, published by the Ministry of Agriculture and Fisheries, early cooking varieties of apples are mostly only in poor to fair condition, the exceptions being the " Lord Derby " and " Grosvenor " varieties at Wisbech and West Norfolk, which are reported to be in good condition.

In regard to the condition of " Bramley's Seedling " variety of apples, the details are as follow:—

Tamar Valley 35-40 (60-65); Devon 41-45 (70-75); Hereford—very variable—20 (65); West Gloucester—patchy—15 (60); North Gloucester 21

(70) ; Somerset 40 ; Evesham and Pershore area 30 (75) ; West Sussex 50 (70) ; East Sussex 45 (70) ; Kent 45 (75) ; Middlesex and South Bucks. 47 (60) ; Essex 50 (65) ; Cambs. 15 (66) ; Wisbech and West Norfolk 10-15 (70) ; East Norfolk 40-50 (70) ; Lincs. (Holland) 10 (95).

The scale on which the index figures are based was :—

0 - 20	Very bad.
21 - 40	Bad.
41 - 60	Fair.
61 - 80	Good.
81 -100	Very good.

The figures quoted in brackets relate to the condition of the crop at the corresponding date of last year.

In regard to Plums, the condition is variable, but the varieties " Czar ", " Purple Pershore ", " Pershore Egg " and, in the case of some districts, " Victoria " appear to be fairly good on the whole.

EXTENSION OF THE MILK INDUSTRY ASSISTANCE GRANT.

On July 5th a financial resolution was moved in the Imperial House of Commons to extend by twelve months the provisions of the Milk Acts, 1934 and 1936. These Acts, which are not to be confused with the Northern Ireland Milk and Milk Products Act, but have considerable bearing on the latter, are concerned chiefly to provide assistance to milk producers in the United Kingdom who sell milk for manufacture into butter, cheese and cream. The extension of these provisions is thus of first importance to Northern Ireland milk producers.

When in 1931 the reorganisation of the agricultural market was first regarded as practical politics it was proposed that agricultural production should receive a measure of protection by means of quantitative regulation and other forms of import control in order that under this shelter measures could be taken to increase the efficiency of the industry. Thus, in the case of pigs, for instance, compulsory quantitative regulation of imports of bacon and hams from foreign countries was introduced concurrently with a scheme for the reorganisation of pig marketing in 1933. Protection for milk producers, however, was a rather more complicated matter. Roughly 50 per cent. of the butter and 62 per cent. of the cheese consumed in the United Kingdom comes from Empire countries and under the Ottawa Agreement Act of 1932 His Majesty's Government in the United Kingdom was precluded for three years from imposing duties on dairy produce from the Dominions, with the exception of the Irish Free State. Thus, though a duty of 15/- per

cwt. was imposed on imports of butter and cheese from foreign countries, the free entry of Dominion produce meant that home producers of milk were virtually unprotected. Imports of butter from the Irish Free State were subject to a duty of 30 per cent. ad valorem, but the effect of this duty was neutralized by high export bounties. If assistance in the form of reorganisation schemes was to be introduced for milk it was apparent that some attempt should be made to assist producers of manufacturing milk as well as producers of milk for liquid consumption, and in default of protection it was decided to provide direct assistance to manufacturing milk producers.

So far as Northern Ireland is concerned the Milk Act of 1934 provided that for a period of two years after April 1, 1934, certain sums should be advanced to the Northern Ireland Exchequer and thence into the Northern Ireland Milk Fund to keep the average price of milk sold to creameries for manufacture up to 5d per gallon in summer and 6d per gallon in winter. The total sum to be paid to creameries (known as the Milk Industry Assistance Grant) was not to exceed £200,000 in the first year. In 1934/35 £168,105 were paid to creameries out of this Grant.

It was anticipated that by the end of 1936 the Reorganisation Commission for Milk, which was set up in 1935 to consider the results of the marketing schemes and to make recommendations for their more efficient working, would have presented its report and that the Government would be in a position to introduce, on the basis of the Commission's findings, a long-term policy for the reorganisation and assistance of producers of milk for manufacture. The report of the Reorganisation Commission, however, was delayed, and early in 1936 a measure known as the Milk (Extension of Temporary Provisions) Act, 1936, was introduced, among other things, to extend for a further period of 18 months payments to creameries in order to maintain the price of milk sold for manufacture.

In November, 1936, the Reorganisation Commission for Milk issued its report. It made certain recommendations for increasing the efficiency of the milk manufacturing industry in Great Britain, but it did not appear to the Commission that prices of milk products could be substantially raised by increased import control or by the imposition of further duties on imports. Up to June 3rd of this year the Government has been receiving the views of the numerous organisations engaged in the industry with regard to the recommendations of the report and is now considering these views. The Government will not be able to introduce a long-term policy for the milk industry until all proposals have been thoroughly examined, and it has thus been found necessary to extend the assistance to the industry for a further period of 12 months from the beginning of September, 1937, to the 31st August, 1938, Northern Ireland milk producers who sell their milk for manufacture to creameries will consequently continue to receive assistance similar to that which they have received since April 1st, 1934.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934:—

PIG PRICES FOR JULY, 1937.

The following announcement was made by the Pig Industry Council for Northern Ireland.

PRICES FOR DEAD PIGS.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland, in July, 1937, are as follows:—

Weight Class. (Dead Weight).	Grade 1.	Grade 2.	Grade 3.		Partly Black pigs.
c.1.0.21 to c.1.2.3 ..	70/11	67/11	64/11		5/-
Weight Class. (Dead Weight.)	**Grade A.**	**Grade B.**	**Grade C.**	**U.L. or U.F.**	**below relevant Grade Price.**
c.1.2.4 to c.1.2.14 ..	70/11	67/11	64/11	61/11	
c.1.2.15 to c.1.3.14 ..	70/11	67/11	64/11	61/11	
c.1.3.15 to c.2.0.0 ..	67/11	64/11	61/11	58/11	
c.2.0.1 to c.2.0.14 ..	61/11	58/11	55/11	52/11	

Pig carcases c.1.0.0 to c.1.0.20:—59/11.

U.L.—Under Grade A. measurements. U.F.—Over Grade C. measurements.

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase weighing not less than c.1.0.21 or not more than c.2.0.14 is condemned and the existence of disease could not reasonably have been known to the producer before despatch to the curer the appropriate grade price shall apply. If the carcase is wholly condemned on account of disease, the existence of which could not reasonably have been known to the producer before despatch to the curer, the revelant Grade 2 or Grade B price shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Wiltshire Pigs Sold on Direct Contract.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of July, 1937, are as follows:—

Weight Class. (Dead Weight.)	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.0.21 to c.1.2.3 ..	74/11	71/11	68/11	61/11
c.1.2.4 to c.1.2.7 ..	Grade A. 71/11	Grade B. 68/11	Grade C. 65/11	U.L. or U.F. 62/11
c.1.0.0 to c.1.0.20 ..	Suitable 63/11		Unsuitable 61/11	
Over c.1.2.7 ..	On the same basis as pigs sold dead.			

Prices for Live Pigs Sold to the Pigs Marketing Board (Northern Ireland).

In the case of pigs sold alive to the Pigs Marketing Board during July, 1937, the prices, according to grade, are as follows:—

Live Weight.	Grade 1.	Grade II.	Grade III.	Unsuitable.
c.1.1.14 to c.1.2.13 ..	48/–	48/–	48/–	46/6
c.1.2.14 to c.2.0.0 ..	56/3	54/–	51/9	46/6
c.2.0.1 to c.2.1.14 ..	53/3	51/–	48/9	46/6
c.2.1.15 to c.2.2.7 ..	51/–	48/9	46/6	44/3
c.2.2.8 to c.2.2.21 ..	46/6	44/3	42/–	39/9

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0. to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a contribution at present amounting to 1/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6d. per pig for marketing charges.

In addition to the foregoing information regarding the pig prices for July, it should, perhaps, be mentioned that as and from the 1st instant until the end of the year an arrangement has been made that whilst the roll and ham formula price will continue the price of pigs to the Wiltshire curers will be based not upon the realised price of their bacon but by taking the average of first and second quality bacon pigs as published in the Agricultural Market Report of the Ministry of Agriculture and Fisheries each week. The price the Northern Ireland curer is paying for July is the average of the English first and second quality baconer price during the four weeks ended June 23rd, or 64/6 per cwt. This, however, is not the price which the producer receives as the Pigs Marketing Board has undertaken for July to make up the price to the producer to 71/11d. per cwt., namely 4/- above the roll and ham price of 67/11d. The Pigs Board will continue to raise the price of Wiltshire pigs to the producer up to 4/- above the roll and ham price so long as the average of first and second quality baconer pigs in Great Britain is less than the roll and ham formula price in Northern Ireland.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 19th June, was 10/1¼d. This figure has been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based :—

Maize Meal	30%
Barley Meal	30%
Pollards (White)	20%
White Bran	10%
Meat Meal (60% Protein)	10%

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during May, 1937.

Under c.1.0.21.		c.1.0 21. to c.1.2.3.				Totals
Suitable	Unsuitable	Grade 1	Grade 2	Grade 3		
1.37	.17	3.70	4.57	5.03	.07	14.91

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
11.63	18.74	2.80	.44	8.39	19 65	3.52	.91	3.60	9.27	1.36	.32	80.63

UNGRADED CARCASES.

Under Grade A measurements. U.L.	Over Grade C measurements. U.F.	Wholly condemned. U1.	Wholly black, injured or damaged. U2.	Overweights, boars, sows, etc. X.	Partly Black. Y.	
.03	3.13	.05	.42	.81	.02	4.46
					Total	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The average price paid to producers for pig carcases during the month of May works out at £5 12s. 0d.; the average weight at c.1 2q. 20lb.; and the average price of pork at £3 6s. 11d. per cwt.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935.

The total amount of payments made under the Acts to Northern Ireland owners up to and including 26th June, 1937, was £721,326 17s. 9d. and was in respect of 345,553 animals sold on a live weight basis. These figures compare with a total sum of £2,345,912 2s. 6d. for 960,064 animals in Scotland, £7,406,432 1s. 3d. for 3,127,644 animals in England and Wales and a total of £10,473,671 1s 6d. for 4,433,261 animals for the whole of the United Kingdom.

The average payments made per head of cattle were as follow: Northern Ireland, £2 1s. 9d.; Scotland, £2 8s. 10½d.; England and Wales, £2 7s. 4d.; and for the whole of the United Kingdom, £2 7s. 3d.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

HAY.—The importance of having good, well-saved hay is well recognised, and during suitable weather, hay-making should take precedence over all other farm work at this time, assuming that potato spraying has been done. To get hay of the best quality it is necessary to cut it early. Delay in cutting is due in most cases to a desire to obtain an increase in the total weight of the crop, but it should be noted that any increase obtained in yield in this way is more than offset by the reduced feeding value of the hay. Grass improves in quality until the seed begins to form. Thereafter, the feeding constituents in the leaves and stems of the plants are transferred to the seeds, while the stems and leaves are correspondingly impoverished and the amount of woody or fibrous material in the hay is increased. Moreover, when cutting is deferred, the seeds of many weeds fall to the ground and may subsequently grow and produce weeds in the pasture to the exclusion of better grasses. Early cutting of hay is, accordingly, strongly recommended.

Loss of nutritious material is also caused by excessive exposure of the cut hay to rain and sun. While weather conditions will determine the length of time from cutting to stacking, every effort should be made to prevent losses by getting the hay into field ricks as soon as it is in a fit condition. The ricks should be carted to the stackyard as soon as possible after the hay has dried out sufficiently to permit of it being stacked with safety. Delay in removing the ricks from the fields not only results in a considerable quantity of the hay on the outsides and at the bottoms of the ricks becoming damaged and rendered either completely unfit for feeding purposes or reduced greatly in feeding value, but also prevents cattle being turned on and making full use of the aftermath.

Hay intended for seed-saving should not be cut until fully ripe, otherwise the weight and quality of the seed may be materially reduced. Only good, clean crops of hay, which are reasonably free from weeds and useless grasses, should be reserved for seed-saving. Seed from inferior crops is of poor quality, as well as being low in quantity, and the returns per acre obtained for such seed do not usually cover the extra expense of seed-saving when the loss in the feeding value of the hay is added.

SPRAYING OF POTATOES.—As potato blight has already appeared in some districts, spraying should be carried out immediately, if not already done. Spraying is a preventive of blight, not a cure, so that the crop should be sprayed before any signs of the disease appear.

The Burgundy mixture, made by dissolving 8 lb. copper sulphate (bluestone) in 35 gallons of water and adding to this a solution of 10 lb. washing soda in 5 gallons of water, is still unsurpassed as a preventive of blight under Northern Ireland conditions. Experiments to determine the comparative efficacy of dry powders have shown that this treatment is not so consistently reliable as the Burgundy mixture and, accordingly, the dusting of the crops with such powders cannot be recommended, except in special circumstances where there is a practical difficulty in having wet spraying carried out.

It should be borne in mind that one spraying is not sufficient to afford continued protection against blight and that a second spraying should be carried out in about three weeks' time after the first application has been given. During wet seasons, a third spraying is necessary. Further information regarding blight disease and its control is given in Leaflet No. 50.

"Rogueing" of Potatoes.—The importance of having potato varieties pure should be borne in mind. The presence of "rogues" in potato crops can be detected most readily when the plants are in flower, and an effort should be made when the crop reaches the flowering stage to remove any plants of other varieties which may be present. "Rogueing" should be done thoroughly by digging the plants out completely and collecting all the tubers; even if a few tubers are left in the ground they are likely to get into the produce at digging time and thus adulterate the seed for next year's planting, which means additional "rogueing" work, besides leading to trouble if potatoes for seed purposes are to be sold.

Examination of Healthy Stocks.—Crops grown from healthy stocks of potatoes should also be examined now and any plants showing symptoms of diseases, such as leaf roll and mosaic, removed. This work is best carried out as early as possible, as these diseases can be most readily recognised when the plants are young. Further, when plants showing symptoms of these diseases are removed early, there is less risk of the disease spreading to adjoining healthy plants.

Inspection of Growing Crops.—Where applications to have potatoes inspected for the Ministry's Purity Certificate have not already been sent to the Ministry, or to the local Potato Inspector, they should be sent in immediately. The possession of a certificate enhances the value of the crop, should the produce be intended for sale for seed purposes. Lists of growers of certified crops will be published by the Ministry in due course.

Turnips.—The singling of turnip crops should be carried out as soon as the plants can be readily separated; early thinning and reasonably close

spacing (about 10 inches apart) assist in the production of heavy yields. Periodic cultivation after singling keeps weeds in check and promotes the growth of the crop.

Weeds.—Weeds, such as thistle, dock, ragwort ("ragweed" or "benweed") and ox-eye daisy or "dog" daisy, should be destroyed before the seeding stage is reached. It is an offence under the Weeds' Act to allow such weeds to produce seed on any part of the farm, and inspections are now being carried out by the Royal Ulster Constabulary to ascertain if cutting has been carried out. During showery weather, and when there is too much dew to permit of hay-making, weed destruction can be conveniently carried out. Cutting twice during the summer months is the best method of exterminating weeds on the farm.

Bracken.—Persistent cutting is the most satisfactory method of destroying bracken. If these weeds are cut now, and again in six weeks' time, the underground stems of the plants will be considerably weakened, and infestations reduced.

Pasture.—Fields which have not been closely grazed and on which there is a considerable amount of "shot" grasses, will benefit considerably from top mowing now. This encourages the growth of fresh bottom grass, which is high in feeding value, and at the same time destroys weeds. The suggestion that there would be a serious loss of pasture if top-mowing were carried out is a fallacy. Grass which is allowed to grow and run to seed is less nutritious than fresh, young grass and is, moreover, unpalatable to stock.

Where grass is plentiful and the number of stock is insufficient to graze the land closely, it is a wise plan to remove the stock from a field and to take a crop of hay from it in the course of a week or two. The extra hay is always useful, while the grazing will benefit considerably.

SEASONAL LIVESTOCK NOTES.

Milk Production.—Since the feeding value of pastures decreases as the season advances, it is generally necessary to feed an allowance of meals to the higher producing cows to maintain the milk yield, except where first class pastures are available. A mixture of equal parts crushed oats, maize meal and decorticated earthnut cake is suitable for this purpose. If a supply of crushed oats is not available, 2 parts maize meal can be used along with 1 part decorticated earthnut cake.

The attention of milk producers is directed to the care necessary in the handling of milk during warm weather to ensure that its keeping qualities are not impaired. Cleanliness and efficient cooling after milking, are the most

essential factors in the production of milk which will keep sweet for reasonably long periods. These points of management are essential to ensure that the milk is of the standards required. Full particulars regarding the production of clean milk are given in Leaflet No. 39.

Water Supply.—The importance of providing a supply of fresh, clean water for stock on pasture should not be overlooked. An inadequate supply of water may have an adverse effect on milk yields, and also on normal thriving, particularly in the case of young calves being weaned from milk.

Weaning of Calves.—When calves are being weaned from milk, the milk supply should be withdrawn gradually and an allowance of meals given. A mixture of crushed oats, maize meal and bran is suitable for this purpose. After the milk has been finally withdrawn, a mixture of 2 lb. crushed oats and 1 lb. linseed cake per head daily forms a very good meal ration. This mixture, since it contains linseed, should be fed dry and not in a wet or partly cooked condition, otherwise there is a grave risk of poisoning occurring (see Leaflet No. 19—How to Feed Linseed). Further particulars regarding the rearing of calves are given in Leaflet No. 54. As intimated in last month's Report, this leaflet has been revised and now contains information regarding the rearing of calves when supplies of separated milk are limited, or are not available, as well as full particulars of the normal method of rearing when plentiful supplies of separated milk are available.

Sheep.—Sheep flocks should be watched carefully at this time, particularly during spells of damp, sultry weather, for attacks of the sheep-maggot fly. To aid in preventing attacks, the sheep should be kept as clean as possible. All dirty wool in the region of the tail and hind quarters should be clipped off. Since sheep which are scouring are very prone to attacks of maggots, the flock should not be changed suddenly to fresh pastures containing a high proportion of clover and of young succulent grass as, in such circumstances, scouring will likely occur. When attacks occur, the maggots should be rubbed out, using carbolic sheep dip to assist in dislodging the pests. Sores should be dressed finally with an ointment made up of powdered sulphur mixed with either fresh lard or linseed oil. A supply of this ointment should be available always in the event of attacks occurring.

Pig Feeding.—A warning is again issued to pig feeders against the use of fish meal, cod-liver oil and linseed cake meal in rations for fattening pigs. From reports received it is evident that many pig feeders are not taking sufficient care in the choice of foods and that as a result soft, oily bacon of inferior quality is being produced. The foods mentioned above will produce this type of bacon and their inclusion in rations for fattening pigs cannot be recommended. Further, the use of excessive amounts of maize meal, or of

other maize products, in pig rations is also a common cause of bacon of soft, oily type being produced, and should be avoided. Although the lower price of maize meal in comparison with other feeding stuffs may tempt feeders to include larger proportions of this food in mixtures than is the usual custom, the far-reaching effects which the production of bacon of poor quality will have on the pig industry generally, should be obvious to everyone, and it is, therefore, in the interests of all pig feeders, irrespective of the numbers of pigs kept, to ensure that the rations used are such as will produce bacon of the best quality.

While cod-liver oil in small quantities may be useful for young pigs, particularly during the winter months, its use for older pigs is neither necessary nor economical.

If separated milk is available, there is no necessity to use any other protein supplement in pig rations, but if milk is scarce the most desirable substitutes in the case of fattening pigs are high grade meat meal and extracted soya bean meal. Linseed cake meal is both expensive and unsuitable for feeding to pigs intended for bacon. Meat meal and soya bean meal are cheaper than fish meal and their use instead of fish meal will cheapen the cost of producing bacon pigs.

SEASONAL GARDEN AND ORCHARD NOTES.

Spraying Apple Trees.—The final application of Bordeaux mixture should be given to Bramley's Seedling apple trees about the last week of July, using half-strength mixture; that is, 1 lb bluestone, 4½ lb. hydrated lime (or 8 lb. lime putty), and 40 gallons of water.

Preparations should now be made for the marketing of early apples. Supplies of the necessary containers should be obtained in good time.

Strawberries.—Strawberry runners for planting in August should be selected now from heavy-cropping, healthy plants. Only the first plantlet on each runner should be allowed to develop, and this should be layered on the soil between the rows of plants so as to ensure satisfactory rooting. As soon as the strawberry crop has been gathered, the plantation should be cleared of all weeds, straw, damaged foliage and surplus runners. The soil between the plants should not be dug but lightly hoed, and some of the loose soil should be drawn up around the plants.

Bush Fruits.—A careful watch should be kept for the appearance of the second brood of the caterpillars of the gooseberry sawfly, and as soon as any caterpillars are seen the bushes should be sprayed with a suitable insecticide.

Plantations in which the first brood of this pest was prevented from developing are seldom affected by a second brood. Particulars regarding the control of sawflies are given in Leaflet No. 12.

As soon as the black currant crop has been gathered some of the older branches should be cut out so as to assist the development of the young branches on which next year's crop of fruit will be borne.

Raspberry and loganberry canes which have fruited this year should also be cut out as soon as the crop has been gathered.

Vegetables.—Seeds of spring cabbage should be sown about the third week of July, though in late districts sowing may be done from ten to fourteen days earlier. The seed bed should be made fine and the seed sown thinly in rows. Early Market, Durham Early and Flower of Spring are suitable varieties.

A sowing of parsley should be made now for use next spring, and a sowing of garden turnips of the variety Golden Ball, if made now, will provide suitable roots for use during winter.

About the second week of August seeds of such varieties of lettuce as May Queen and Imperial should be sown. The resulting plants should be transplanted in late September and will normally be fit for use next spring.

The varieties of onions known as Unwin's Reliance and Sutton's Solidity are recommended for sowing in early August to provide mature bulbs early next summer. Tripoli onions should also be sown in August; Lemon Rocca and Red Italian are suitable varieties.

As soon as the foliage of shallots and potato onions has ripened, the bulbs should be lifted and laid on some hard surface to dry thoroughly. Care should be taken to protect the bulbs from rain during harvesting.

Seeds of cauliflower should also be sown in August, where the plants are to be wintered in a cold frame. Early London and Early Snowball are suitable varieties.

Towards the end of July, early white varieties of celery should be ready for the first earthing up. This crop requires liberal feeding and should not be allowed to suffer from lack of moisture. Half-strength Burgundy mixture should be applied at from 10 to 14 days' intervals to prevent the appearance of celery-leaf blight disease, as recommended in last month's notes.

Flowering Plants.—Many flowering shrubs can be readily propagated now by means of cuttings of half-ripened shoots inserted in sandy soil in a shaded place. Many herbaceous plants, such as geraniums, violas, calceolarias, etc., can also be propagated now by making cuttings of the young shoots.

SEASONAL POULTRY-KEEPING NOTES.

Selection and Management of Breeding Stock.—Birds approaching the end of their first laying season, which are intended for breeding, should be examined now and the best selected for retention. Only large-framed, good-bodied birds typical of their breed and with plenty of stamina should be retained for breeding purposes. Birds which show any defect, weakness or delicacy in constitution should not be selected, no matter what their egg records may be. Such birds are best disposed of for table purposes before moulting commences. It is a wise plan to select a greater number of birds than will be required eventually for the breeding pens, provided the accommodation available permits of this being done, so as to allow for the removal of any birds which may show undesirable characteristics at a later stage.

The birds selected for breeding should be encouraged to take a rest from laying and induced to moult, so that they may be in a suitable condition to produce good eggs for hatching early in the season. This may be done by giving them a complete change of ground, housing and food. The selected birds should be put out in a field and a portable house provided for them. The feeding should consist largely of grain, and little, if any, mash given. A mixture of whole oats and wheat, or oats only, is suitable for this purpose. Two feeds of grain daily will suffice and the quantity given at each meal should be regulated so that the birds are hungry for the next feed. At no time, however, should the birds be allowed to become too hungry as this may have injurious effects later. The feeding of a grain mixture should be continued until moulting is general in the flock when the feeding of mash can be introduced. The mash should consist of plain, body-building foods, such as bran, pollard and maize meal; milk or other protein-rich foods, such as fish meal or meat meal, should not be included in the diet. Further information on the selection and management of breeding stock is given in Leaflets Nos. 29 and 83, respectively.

Cockerels for Breeding Purposes.—The cockerels which have been retained from early hatched flocks for breeding purposes should be examined from time to time, and any birds not developing properly, or showing defects, disposed of. Where accommodation permits, cockerels for breeding purposes should be housed apart from other birds, kept on free range and fed on plain, body-building foods so that they may have every opportunity of developing naturally into vigorous, robust stock birds.

Pullets.—The pullets from early hatched flocks will soon be coming into lay and while eggs are an asset at any time of year, the birds should on no account be forced to come into production before growth and development are complete. Protein-rich foods, such as milk, fish meal, meat meal and soya

bean meal should be used very sparingly in mashes and greater use made of body-building foods, such as bran and grain. Birds which mature too rapidly and start laying at an early age produce small eggs and rarely prove satisfactory. It is better to cull out such birds and sell them for table purposes, along with those which show lack of vigour, or poor health.

It is a great mistake to retain all the pullets reared, irrespective of their qualities and suitability for egg production purposes. Even in the best flocks there are generally some birds which are not likely to prove profitable egg producers, and the retention of such birds increases the cost of egg production and reduces the profits obtained. In view of the increased cost of feeding stuffs it is of the greatest importance that only those birds which are capable of withstanding the strain of sustained egg production be retained, and strict attention should, therefore, be given to the culling of flocks. Useful hints on the selection of pullets for egg production are given in Leaflet No. 29. The Instructor in Poultry-keeping for the district will also visit and advise on the culling of flocks, on request.

Care of Eggs.—The importance of marketing fresh, clean, infertile eggs which will reach the consumer in good condition may again be pointed out. Frequent collection from the nests, storage in a cool place and marketing at least twice weekly, are essential. Allowing broody hens to sit on nests is a far too common cause of poor quality eggs being marketed. The broodies should be removed from the nests immediately they become broody, and, if not intended for retention as breeders, placed in a coop and fed well. If this is done, broodiness is easily checked and the hens will soon come into production again. An egg case is a convenient and suitable receptacle for storing eggs after they are lifted from the nests and before they are marketed.

Turkeys.—Green food in mashes for young turkeys can be dispensed with after the birds have got their red heads. From this time onwards they should be capable of foraging for much of their food and the number of meals can be reduced to three per day. The evening meal should be substantial, however, so that the birds go to roost with full crops. The morning food should be given indoors before the birds are allowed out, as otherwise they may not eat sufficient for their requirements. Particulars of suitable mashes for young turkeys are given in Leaflet No. 37.

Table Ducklings.—Ducklings for table purposes should be well fed, so that they may be ready for marketing when they are from 8 to 10 weeks old. At about 10 weeks of age the change from down to adult feathering begins to take place in ducklings and if the birds are not marketed prior to this change, they have to be kept for another period of about 6 weeks. By this

time prices are likely to be lower, as the earlier in the season the birds are marketed, the higher are the prices likely to be obtained. For about a fortnight previous to marketing, the ducklings should be fed on a fattening mash, consisting largely of foods, such as Sussex ground oats and barley meal, which will produce firm flesh of good quality. The mash should be wet with separated milk or buttermilk.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Schools.—The next session at the Ulster Dairy School, Cookstown, and at the North-West School, Strabane, begins on Tuesday, 20th July. Particulars regarding the progress made by pupils at the former School during the term which ended on the 18th June last are given on page 138.

Greenmount Agricultural and Horticultural College.—The 1937-38 session at this college begins on Tuesday, 12th October. Applications for the Scholarships, offered by County Committees of Agriculture, should be made to the Secretary, County Committee of Agriculture, before the 31st July next. Particulars regarding the courses of instruction provided are given on page 143 and in the prospectus which can be obtained free on request from the Secretary, County Antrim Committee of Agriculture, Courthouse, Crumlin Road, Belfast, or from the Ministry.

Queen's University Scholarships.—Applications for the Ministry's Scholarships in Agriculture, tenable at Queen's University, should be sent to the Ministry before the 15th August next. See page 142 for further particulars.

Noxious Weeds.—The inspection work in connection with the destruction of noxious weeds, by the Royal Ulster Constabulary, is now in progress. All landowners are strongly urged to have all weeds destroyed in good time. Neglect to do so may lead to a prosecution.

Inspections of Potato Crops.—The inspections of growing crops of potatoes for purity certificates are now in progress. Growers who wish to obtain these certificates should apply to the Ministry, or to the local Potato Inspector, immediately, to have their crops inspected, if they have not already done so.

Licensing of Bulls.—The inspections for the licensing of bulls will be carried out during August. Applications for inspections should reach the Ministry not later than the 31st July next. Forms of application may be obtained from the Ministry, or at any Police Barracks.

Sheep Dipping.—Sheep owners are reminded that the summer dipping period commenced on the 28th June last, and that all sheep must be dipped twice during the period from that date to the 28th August, allowing an interval of not less than seven or more than fourteen days between the two dippings.

Blood Testing of Poultry.—As will be seen from page 140 the scale of fees for the blood testing of poultry for Bacillary White Diarrhoea has been revised and now offers a further inducement to poultry keepers to have all their birds tested. Applications to have blood testing carried out should be made to the Poultry Instructor for the district, or to the Secretary, County Committtee of Agriculture, as soon as possible but not later than the 1st August next. The earlier the applications are lodged the less delay there will be in having blood-testing done.

Stormont Laying Test.—The laying test at Stormont provides an inexpensive means of determining the laying capacity of the birds on the farm and offers a unique opportunity to poultry keepers to obtain valuable information. Further, birds which qualify for copper rings at the test are eligible for entry at the Official Breeding Station, Hillsborough, and in this way officially bred cockerels and pullets may be obtained. Entries of pens for the next test, which begins on the 1st October, 1937, should be made not later than the 1st September. Copies of the rules of the test will be available soon, and may be obtained along with entry forms free, on request, from the Ministry, or from the Instructors in Poultry-keeping.

Leaflets.—Copies of the Leaflets mentioned in this Report are obtainable free, on request.

SCHOOL NEWS

The second term of the year 1937 at the Ulster Dairy School, Cookstown, ended on the 18th June last. As a result of the examinations held at the end of the term, Miss E. C. Cassidy, Sandhill, Derrygonnelly, Co. Fermanagh, who had completed her fourth term at the School as specialiser in dairying with a free place qualified for the award of a Creamery Scholarship. This Scholarship entitles Miss Cassidy to a period of training of 24 weeks' duration at a creamery approved by the Ministry, during which time she will receive an allowance towards the cost of maintenance and on the conclusion of her creamery training she will be eligible for examination for the Ministry's Certificate of Competency in Creamery Butter-Making. The following pupils who had completed the ordinary School Course of three terms were successful in qualifying for Certificates in Poultry-keeping, Dairying, and Rural Housewifery :—

Miss M. V. C. Bond, Ivy House, Lackaugh, Donemana, Co. Londonderry.

Miss E. H. Brown, Balleglish, Moneymore, Co. Londonderry.

Miss I. J. Duncan, The Harp, Trillick, Co. Tyrone.

Miss S. D. Elliott, Drumconnis, Ballinamallard, Co. Fermanagh.

Miss S. M. Hamilton, Killycolp House, Tullyhogue, Dungannon, Co. Tyrone.

Miss A. G. M'Clelland, Killymaddy, Bendooragh, Ballymoney, Co. Antrim.

Miss R. K. M'Rory, Drumnakilly, Sixmilecross, Co. Tyrone.

Miss M. A. Moffatt, Ballyreagh, Cookstown, Co. Tyrone.

Miss I. Watt, Cork Hill, Rock, Dungannon, Co. Tyrone.

Certificate in Poultry-Keeping and Dairying:—

Miss M. A. Mohan, Drumcrow, Newtownbutler, Co. Fermanagh.

Certificate in Poultry-Keeping and Rural Housewifery:—

Miss R. G. L. Watson, Mental Hospital, Downpatrick, Co. Down.

Certificate in Poultry-Keeping:—

Miss S. K. Gallagher, Cornamuck, Dromore, Co. Tyrone.

Miss S. M. Hamilton obtained first place in the third term class and reached the standard for admission to the Senior Course for training with a view to qualifying as Teacher.

The following pupils, who gained high marks in the examination, are being admitted for a fourth term of training at the School:—

Miss A. G. M'Clelland, to specialise in Poultry-Keeping.

Miss E. H. Brown, to specialise in Dairying.

Miss I. Watt, to specialise in Rural Housewifery.

These three pupils will receive their fourth term of training free of cost.

The next term at the School will commence on the 20th July.

Applications for admission to the term which will begin on the 12th October are now being received by the Ministry and girls who intend to take out a course of training are advised to send their applications to the Ministry as soon as possible as applicants are admitted to the School in the order in which their applications are received. There is no qualifying examination for admission.

Copies of the Prospectus which contains an application form may be obtained free of charge from the Secretary, County Committee of Agriculture, the Instructor in Poultry-Keeping, the Lady Superintendent, Ulster Dairy School, Cookstown, or from the Secretary, Ministry of Agriculture, Stormont, Belfast.

SCHOLARSHIPS IN CREAMERY MANAGEMENT 1937.

In connection with the award of the above Scholarships by the Ministry of Agriculture the following candidates, as a result of the competitive examination held on the 30th April last, are declared successful :—

John Young, Lough Road, Ballymaguigan, Magherafelt, County Londonderry.

John Johnston Simpson, Grovehill, Bally, Ballymena, County Antrim.

REGISTRATION OF ACCREDITED POULTRY FARMS SCHEME.

Applications are invited from poultry breeders who desire to have their farms registered, and who will undertake to comply with certain conditions designed to ensure that the birds on their farms are free from Bacillary White Diarrhoea disease. Copies of the conditions, and forms of application, may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast. The last date for the receipt of application forms duly completed will be 30th September, 1937.

In order to encourage blood testing and to facilitate breeders wishing to have their farms registered, the scale of charges for the blood testing of poultry for Bacillary White Diarrhoea has been further reduced, and the revised scale became operative as from 1st July.

It is desired to remind poultry keepers who intend to have birds blood tested that early application should be made to the Instructor in Poultry-keeping for their County or district, and in any case not later than 1st August. Applications received after that date cannot be dealt with by the Instructor until all previous applications have received attention, so that when an application is received after 1st August considerable time may elapse before the testing of the birds can be carried out.

Full particulars regarding the Scheme for the blood testing of poultry, and the revised scale of charges, may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast, or from the Instructor in Poultry-keeping.

The names and addresses of these Instructors, and the areas covered by each, are as follow :—

County.	Name and Address of Instructor.	Area in which Instructor is working.
Antrim (North)	Miss A. M. Nedwill, 9 Broughshane Street, Ballymena.	North of the rivers Main and Kells Water to Moorfields and north of a line from Moorfields through Buckna to The Sheddings to Glenarm.
Antrim (South)	Miss R. E. Dick, Church Street, Antrim.	Remainder of County Antrim south of the line referred to above.
Armagh	Miss A. G. English, 9 Barrack Hill, Armagh.	Entire County of Armagh.
Down (North)	Miss E. F. Anderson, Brook House, William Street Road, Newtownards.	Ards peninsula and north of a line from Strangford Lough through Killinchy, Saintfield, and the Temple to Lisburn.
Down (Mid)	Miss L. Walters, Rose Cottage, Spa, Ballynahinch.	The district south of the line referred to above and north of a line from Newcastle through Castlewellan, Dromara, McAdams Loan Ends, Dromore and Waringstown to County boundary.
Down (South)	Miss W. McMullen, 42 Newry Street, Rathfriland.	Remainder of County Down south of the line referred to above.
Fermanagh	Miss A. M. Callery, The Brook, Enniskillen.	Entire County of Fermanagh.
Londonderry (North)	Miss E. McCluggage, c/o Post Office, Dungiven.	The Londonderry and Limavady Rural Districts and the Coleraine Rural District north of the road from Agivey Bridge through Aghadowey to Ringsend.
Londonderry (South)	Miss M. Allison, c/o Mrs. Smythe, Craigmore House, Maghera.	The Magherafelt Rural District and the Coleraine Rural District south of the road from the Agivey Bridge through Aghadowey to Ringsend.
Tyrone (North-West)	Miss M. H. Davidson, Homelea, Omagh.	The Rural Districts of Omagh and Trillick, Strabane and Castlederg.
Tyrone (South-East)	Miss M. C. J. Davidson, Ranfurley Arms, Dungannon.	The Rural Districts of Dungannon, Cookstown, and Clogher.

COMPULSORY LICENSING OF BULLS.

Bulls which were born in July, August, September, October, November and December, 1936, must be licensed by the 30th September, 1937, and applications for licences on the prescribed forms must reach the Ministry's offices not later than the 31st July, 1937. Farmers should apply immediately to the

Ministry for the necessary form and a list of centres at which bulls will be inspected for licences.

It is understood that such forms and lists may also be procured at any police barracks. Every person who lodges on the prescribed form an application for a licence not later than the 31st July, 1937, will be notified by the Ministry regarding the actual place, date and hour appointed for the inspection of his bull.

CORRECTION.

In an article with the title Grade and Dead Weight Scheme (2. Sheep and Lambs), printed in the May issue of the Report it was stated that "ungradeable carcases (and in this class are included animals wrongly described) are disposed of on commission". Actually sale on commission is only resorted to where the consignèe and the Head Grader fail to agree on a price.

Producers are also asked to note that the English Ministry's Marketing Leaflet No. 46, also referred to in the article, has now been superseded by Leaflet No. 75, which should be taken as the authoritative account of the Scheme.

SCHOLARSHIPS IN AGRICULTURAL SCIENCE.

The attention of young men in Northern Ireland is directed to the offer by the Ministry of Agriculture of not more than six Scholarships in Agricultural Science for competition in the autumn of this year among young men in Northern Ireland. Each Scholarship is of the value of £95 per annum, and is tenable for four years in the Faculty of Agriculture of Queen's University, Belfast. Successful candidates are afforded an opportunity of securing advanced training in Agricultural Science, and of obtaining, on conclusion of their course, the Degree of Bachelor of Agriculture. Candidates must be between the ages of 17 and 30 on the 15th November, 1937, and must have passed the Matriculation Examination of the Queen's University or its accepted equivalent. Eligible applicants will be submitted to an examination, the object of which will be to test their knowledge of practical Agriculture, and their knowledge of Elementary Science applied to Agriculture.

In addition to the Ministry's Scholarships one similar Scholarship is being offered by the Royal Dublin Society under the terms of the Anne Hall Endowment. Competition for this Scholarship will, however, be restricted to applicants from the Counties of Londonderry and Fermanagh. Candidates from these counties should use the application form provided by the Ministry

of Agriculture, and they will be regarded as applying both for the Ministry's and the Society's Scholarships. The examination for all the above-mentioned Scholarships will be held on the same date and at the same place.

For more detailed particulars regarding these valuable Scholarships those interested should communicate with the Secretary, Ministry of Agriculture, Stormont, Belfast. Applications should be received in the Ministry not later than 15th August, 1937.

SCHOLARSHIPS TO GREENMOUNT AGRICULTURAL AND HORTICULTURAL COLLEGE, 1937-38.

Each County Committee of Agriculture in Northern Ireland offers for competition this year Scholarships in Agriculture and Horticulture, tenable at Greenmount Agricultural and Horticultural College, Muckamore, County Antrim, for the session 1937-38. An attractive opportunity is thus offered to farmers' sons in Northern Ireland to secure a sound training in technical agriculture or horticulture through the medium of these Scholarships, which entitle the holders to free tuition, board and residence.

Greenmount College is situated about one mile from Antrim, in a good agricultural district, and amidst pleasant surroundings. Classrooms, laboratories, etc., are set apart for the different subjects in which indoor instruction is given, and these are fully equipped with the necessary apparatus. The farm attached to the College extends to over 240 acres, and besides the instruction provided in practical agriculture and the experience obtained in the running of the farm, the students also receive practical instruction in poultry husbandry, dairying, veterinary hygiene, woodwork, vegetable growing, fruit cultivation and bee-keeping.

The course is primarily intended to give students a sound knowledge of agriculture or horticulture, and of the sciences relating thereto, such as will be of use to them in their future careers. It also provides an excellent preparation for students desirous of competing for University Scholarships in agricultural science, which are offered each year by the Ministry of Agriculture.

Intending candidates should communicate immediately with the Secretary (or Agricultural Organiser) of the County Committee of Agriculture for the county in which they reside, from whom a prospectus of the College, which contains the prescribed form of application, may be obtained. The completed form of application must be sent to the Secretary or Organiser so as to reach him before the 31st July, 1937.

FIFTEENTH EGG-LAYING TEST AT STORMONT.

RESULTS TO END OF TENTH PERIOD.

The tenth four-weekly period ended on the 8th July, 1937. The average egg production for the period, based on the 864 birds originally included, was 14.9 eggs per bird, as compared with 16.7 for the previous period. The decline in egg production was due to the usual seasonal increase in broodiness. Of the 12,920 eggs laid during the period, 11,610 or 89.8 per cent. were scoring eggs, that is, eggs of 2 oz. each or more in weight.

The highest sectional average egg production for the period has been made by the Stationholders' Rhode Island Reds, namely, 15.9 eggs per bird. This average was closely followed by the average returned by the Rhode Island Reds in the Open section and by the Stationholders' White Leghorns, in both of which sections it was 15.8 eggs per bird.

The average production of the 864 birds during the 40 weeks the test has been in progress is 158.9 eggs per bird.

Fifteen birds died during the period, bringing the number of deaths to a total of 62 for the 40 weeks of the test. This represents a mortality rate of 7.1 per cent., which compares with a rate of 9.1 per cent. during the corresponding 40 weeks of the previous test.

The mortality rates amongst the different breeds is shown in the following table:

Breed.	No. of Birds.	No. of Deaths.	Percentage Mortality.
White Wyandotte ..	274	23	8.4%
White Leghorn ..	144	16	11.1%
Rhode Island Red ..	354	20	5.6%
Light Sussex ..	78	2	2.6%
Buff Rock ..	12	1	8.3%
Welsummer ..	6	—	—

The table which follows gives a picture of the position regarding mortality in the different Sections of the test:—

Section.	No. of Birds in Section.	No. of Deaths.	Percentage Mortality.
1. White Wyandottes	168	10	5.9%
2. White Leghorns	78	8	10.3%
3. Rhode Island Reds	186	8	4.3%
4. Any other breed	96	3	3.1%
5. (*a*) Stationholders White Wyandottes	84	8	9.5%
5. (*b*) Stationholders White Leghorns	60	6	10.0%
5. (*c*) Stationholders Rhode Island Reds	120	8	6.7%
6. Clubs Section	72	11	15.3%

It will be seen from the first of these tables that the mortality rate amongst the White Leghorns is nearly twice as great as it is amongst the Rhode Island Reds, and that in the case of the Light Sussex the rate is very low. In regard to the mortality in the different Sections, the high rate amongst the birds in Section 6 is a disturbing feature.

The following are particulars of the leading pens in the different sections as at the end of the tenth period:

SECTION 1. WHITE WYANDOTTES (OPEN). 28 pens.

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 40 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	22	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	892	281	40	4	1,173
2	10	Mrs. D. C. Gamble, Roan Lodge, Coalisland, Co. Tyrone.	705	404	24	1	1,109
3	3	Mrs. J. M. Brogden, Fernshaw, Dungannon, Co. Tyrone.	687	409	130	3	1,096
4	4	Mr. R. A. Copeland, Blackscull, Dromore, Co. Down.	654	417	83	3	1,071
5	5	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	545	498	61	3	1,043

SECTION 2. WHITE LEGHORNS (OPEN). 13 pens.

1	33	Mrs. E. Johnston, Craigboy, Donaghadee, Co. Down.	857	181	19	—	1,038
2	35	Mr. W. D. Anderson, Ballyaugherty, Saintfield, Co. Down.	548	424	17	—	972
3	39	Mr. J. Waugh, Ballyrickard, Kilwaughter, Larne, Co. Antrim.	583	380	36	3	963

SECTION 3. RHODE ISLAND REDS (OPEN). 31 pens.

1	53	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh.	658	542	40	—	1,200
2	64	Mr. H. Ramsey, Sylvan Cottage, Gilnahirk, Belfast.	330	737	122	—	1,067
3	62	Mrs. D. Patterson, Ballycastle Road, Coleraine, Co. Londonderry.	499	523	171	6	1,022
4	63	Mr. W. Patton, The Hill, Loughries, Newtownards, Co. Down.	704	309	34	—	1,013
5	52	Mrs. H. Getty, Hillcrest, Newtownards Co. Down.	553	447	44	1	1,000

SECTION 4. ANY OTHER PURE BREED (OPEN). 16 pens.

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 40 weeks. Super Grade	1st Grade	2nd Grade	Below 2nd Grade	Score Value
1	75	Mrs. M. Finlay, Langfield, Armoy, Co. Antrim. (Light Sussex.)	591	376	202	—	967
2	76	Mrs. H. Getty, Hillcrest, Newtownards Co. Down. (Light Sussex)	383	579	109	3	962
3	88	Mr. R. Holmes, Moneycarrie, Killykergan, Coleraine, Co. Londonderry. (Buff Rock)	360	537	156	11	897

SECTION 5 (*a*). WHITE WYANDOTTES (STATION HOLDERS). 14 pens.

1	93	Mr. C. E. Crooke, The Rocks, Blaney, Enniskillen, Co. Fermanagh.	506	665	126	4	1,171
2	91	Mr. W. A. Bell, Donaghanie, Beragh, Co. Tyrone.	525	556	136	3	1,081
3	99	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	744	307	82	2	1,051
4	95	Miss M. M'Allister, Turnpike House, Backnamullagh, Dromore, Co. Down.	399	630	153	3	1,029

SECTION 5 (*b*). WHITE LEGHORNS (STATION HOLDERS). 10 pens.

1	105	Mrs. J. Brown, Gorsebank, Culcrum, Cloughmills, Co. Antrim.	676	267	49	3	943
2	112	Mrs. M. Noble, Roundpark House, Killycramph, Lisnaskea, Co. Fermanagh.	334	556	83	2	890
3	111	Mrs. J. Knox, Shanmullagh, Ederney, Co. Fermanagh.	472	383	47	1	855

SECTION 5 (*c*). RHODE ISLAND REDS (STATION HOLDERS). 20 pens.

1	127	Mrs. H. McMaster, Little Ballymena, Broughshane, Co. Antrim.	837	213	18	2	1,050
2	117	Mrs. R. J. Dunn, Ballyskeagh, Artigarvan, Co. Tyrone.	549	498	122	2	1,047
3	130	Mrs. H. Rea, Lisowen, Crossgar, Co. Down.	809	217	10	—	1,026
4	116	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim.	516	451	20	1	967
5	124	Mrs. R. McGiffert, Rathcunningham, Toye, Co. Down.	511	453	34	2	964

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 12 pens.

Position.	No. of pen.	Name and Address of Club.	No. of eggs laid during 40 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	135	Aghadowey Poultry Club, Co. Derry. (Rhode Island Reds)	452	477	107	10	929
2	145	Saintfield Young Farmers' Club. Co. Down. (Rhode Island Reds)	414	457	116	3	873
3	141	Crumlin Poultry Club, Co. Antrim. (White Wyandottes)	417	441	214	14	858

The term "Test Score" means the total of the super grade and first grade eggs. The following pens occupied first, second and third place, respectively, in the entire test at the end of the tenth period:—

Pen 53—Rhode Island Reds—Miss J. A. Irwin, Score 1,200 eggs.

,, 22—White Wyandottes—Mr. J. C. Stewart, Score 1,173 eggs.

,, 93—White Wyandottes—Mr. C. E. Crooke, Score 1,171 eggs.

Miss Irwin's pen is the first in this test to gain the distinction of producing an average of 200 scoring eggs per bird.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st July, 1937, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
PROTEIN FOODS :										
Linseed (whole)	13 0	16 0	18 0	18 0	20 0	19 6	24 0	16 0	18 6	17 0
Linseed (crushed)	—	18 0	19 0	19 0	20 0	20 0	—	16 6	—	18 0
Linseed Cake, home-made ..	—	—	12 0	11 0	11 0	11 0	11 6	10 0	12 0	—
Linseed Cake, foreign ..	11 0	—	10 0	10 0	—	—	10 6	9 6	10 6	9 9
Linseed Cake Meal	11 0	10 6	11 6	10 0	11 0	10 6	11 6	10 6	11 0	10 3
Cotton Cake, decorticated ..	10 9	—	9 6	11 0	9 6	9 6	—	10 0	—	10 3
Earthnut Cake, decorticated ..	10 6	9 6	9 6	10 0	—	10 0	—	9 9	10 6	9 9
Soya Bean Meal (extracted) ..	11 3	11 0	10 6	11 0	—	11 6	11 0	11 0	11 6	—
Fish Meal (60% protein) ..	—	—	—	—	—	—	—	—	—	—
Meat Meal (60% protein) ..	16 0	15 6	15 0	—	16 3	16 6	16 0	16 3	15 0	—
Meat and Bone Meal (40% protein)	—	11 6	—	10 6	—	12 6	11 6	—	—	12 0
MEDIUM PROTEIN FOODS :										
Palm Kernel Cake	9 6	9 6	9 6	7 9	—	9 9	—	—	10 0	—
Palm Kernel Meal	9 6	9 6	9 6	7 9	—	9 9	—	—	10 0	—
STARCHY FOODS :										
Maize (whole)	—	—	7 6	6 9	7 3	7 6	7 0	7 6	—	6 6
Maize Meal	8 0	7 6	7 6	7 6	7 9	7 6	7 6	7 6	7 9	7 0
Maize, Flaked	8 6	8 3	8 0	8 0	8 0	8 3	8 6	—	8 9	8 0
Wheat (whole)	10 6	11 0	11 0	11 0	11 6	11 6	—	—	—	—
Bran, Red	9 6	8 6	8 6	9 0	—	8 9	9 0	9 6	8 9	8 6
Bran, White	10 0	9 6	9 3	10 0	10 0	9 6	10 0	10 6	10 0	11 0
Pollard, Brown	9 6	9 0	8 6	8 6	—	8 9	9 6	9 6	9 0	8 6
Pollard, White	—	10 0	9 6	10 0	10 3	9 0	10 0	10 6	10 0	10 9
Barley Meal	10 6	10 0	10 0	10 6	10 0	10 0	10 0	10 6	10 6	10 9
Tapioca Root Flour	—	—	8 3	—	—	8 0	8 6	—	8 6	—
Oats (whole)	9 6	10 0	9 6	10 6	9 0	9 6	12 0	10 0	8 6	9 4
Crushed Oats	10 0	11 0	10 6	11 0	9 6	10 0	—	10 6	9 0	10 0

NON-CONCENTRATES.—The average prices at representative markets at the beginning of July were as follow: Potatoes (old crop), 4/10 per cwt.; Oat Straw, 47/5 per ton; Upland Hay, 80/1 per ton; Meadow Hay, 48/- per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st July, 1937, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein equivalent	Starch equivalent	Average price per cwt. at		Cost per unit of Protein equivalent		Cost per unit of starch equivalent	
			1st July	1st June	July	June	July	June
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed ..	19.0	119.0	18 0	17 8	18 11½	18 7	3 0	3 0
Crushed linseed	19.0	119.0	18 8	19 0	19 8	20 0	3 1½	3 2¼
Linseed cake (home-made)	25.0	72.0	11 3	11 8	9 0	9 4	3 1½	3 3
Linseed cake (foreign)	25.0	72.0	10 2	10 8	8 1½	8 6	2 10	3 0
Linseed cake meal	25.0	72.0	10 9	11 3	8 7	9 0	3 0	3 1½
Decorticated Cotton cake	35.0	71.0	10 1	10 4	5 9	5 11	2 10	2 11
Decorticated Earthnut cake	41.0	73.0	9 11	10 1	4 10	4 11	2 8½	2 9
Extracted Soya Bean meal	38.0	64.0	11 1	10 11	5 10	5 9	3 5½	3 5
Fish meal (60% protein)	53.0	59.0	16 2	16 3	6 1	6 2	5 6	5 6
Meat meal (60% protein)	55.0	61.0	15 10	15 7	5 9	5 8	5 2	5 1
Meat & bone meal (40% protein)	36.0	44.0	11 7	11 2	6 5	6 2	5 3	5 1
Medium Protein Foods								
Palm kernel cake	17.0	75.0	9 4	9 3	11 0	10 11	2 6	2 6
Palm kernel meal	17.0	75.0	9 4	9 6	11 0	11 2	2 6	2 6
Starchy Foods								
Maize	6.8	81.0	7 2	7 5	21 1	21 10	1 9	1 10
Maize meal	6.8	81.0	7 7	7 10	22 4	23 0	1 10½	1 11
Flaked maize	8.6	83.0	8 3	8 4½	19 2	19 6	2 0	2 0
Wheat	9.6	72.0	11 1	11 3	23 1	23 5	3 1	3 1½
Red bran	10.0	43.0	8 11	9 3	17 10	18 6	4 2	4 4
White bran	10.0	43.0	10 0	10 4	20 0	20 8	4 8	4 10
Brown pollard	11.0	60.0	9 0	9 3½	16 4½	16 11	3 0	3 1
White pollard	11.0	60.0	10 0	10 2	18 2	18 6	3 4	3 5
Barley meal	7.0	70.0	10 3	10 5	29 3	29 9	2 11	3 0
Oats	7.6	60.0	9 9	9 8	25 8	25 5	3 3	3 3
Crushed oats	7.6	60.0	10 2	10 5	26 9	27 5	3 5	3 6
Tapioca root flour	1.0	83.5	8 4	8 6½	166 8	170 10	2 0	2 0½
Non-Concentrates								
Potatoes	0.6	18.0	4 10	5 11	161 1	197 3	5 4½	6 7
Upland hay	4.9	24.0	4 0	3 10	16 4	15 8	3 4	3 2
Meadow hay	4.6	31.0	2 5	2 11½	10 6	12 10	1 7	1 11
Oat Straw	0.9	20.0	2 4½	2 4	52 9	51 10	2 4½	2 4

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk, and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ..	88	1	0.2	9
Potatoes ..	75	2	0.1	21
Cabbage ..	89	1.5	0.5	8
Oat Straw ..	14	4	2	37
Meadow hay ..	10	10	3	45
Pasture grass ..	80	3.5	0.8	10
Fattening Foods				
Crushed oats ..	13	9	6	60
Maize meal ..	12	10	4	70
Barley meal ..	13	12	2	66
Pollard ..	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ..	9	40	9	26
Decorticated Earthnut cake ..	10	46	7	23
Meat meal ..	11	60	6	—
Soya bean meal ..	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) the quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the food-stuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given in the table on page 149, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 149 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/9d.
Decorticated earthnut cake	...	...	4/10d.
Soya bean meal	...	...	5/10d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	5/10d.
Meat meal (60% protein)	...	...	5/9d.
Meat and bone meal (40% protein	...		6/5d.

Therefore meat meal (60% protein) is the cheapest source of protein amongst the purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/3d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade, both from the thriving point of view and its effect on the quality of the bacon.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases have been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FAT STOCK.

The following were the average prices per live cwt. of bullocks and heifers, sold at Belfast Auction Marts during each of the five weeks ended 29th June, 1937 :—

Week ended.	Bullocks.	Heifers.
	s. d.	s. d.
1st June ...	45 6	... 44 9
8th June ...	43 6	... 43 3
15th June ...	42 6	... 42 3
22nd June ...	42 3	... 41 6
29th June ...	42 3	... 42 6

If the information you require is not obtainable in these pages, write to the Secretary, Ministry of Agriculture, Stormont, (Room 401), Belfast.

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of June, 1937.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months old)	Fat Sheep (over 2 years old)	Young Pigs
					Cows	Heifers				
		Per head £ s.	Per cwt. Live weight.	Per cwt. Live wgt.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
1	Omagh	7 5	45/– to 47/6	43/6	15 10	14 10	15 0	*1 17/6	*2 5	—
2	Rathfriland	6 4	38/– to 42/–	42/–	15 5	15 0	15 10	*1 14/9 †1 6/6	‡2 1/3 †1 17/6	1 6/3
3	Ballymoney... ...	6 7/3	35/6 to 45/–	42/–	17 10	16 0	15 10	—	—	1 10
3	Strabane	6 5	44/– to 47/–	43/–	15 0	—	14 0	—	—	—
4	Moy	—	37/6 to 46/–	40/–	15 15	13 13/9	16 5	*1 15	*2 0	—
8	Dungiven	—	31/– to 39/–	42/–	14 0	13 0	—	—	—	1 5
8	Irvinestown ...	7 7/9	41/– to 45/–	40/–	15 0	—	14 0	*1 15	‡2 5 †1 5	1 10
9	Crossgar	—	40/– to 45/–	—	17 5	—	15 10	—	—	1 15
9	Kilrea	6 10	40/– to 48/6	—	17 10	15 0	—	‡2 0	—	1 6
10	Enniskillen ...	6 5/6	35/– to 42/–	43/–	15 10	15 0	14 10	‡1 17/6	‡2 10	1 12
11	Ballygawley ...	—	35/– to 46/–	40/–	17 0	—	16 0	—	*2 2/6	1 12/6
14	Limavady	—	33/– to 40/–	42/–	—	12 0	—	—	—	1 6
16	Lisnaskea	5 6/3	32/– to 42/–	42/–	15 10	14 10	15 10	*2 1/6	*1 18	1 14
17	Ballynahinch ...	—	40/– to 43/–	—	17 10	16 10	17 0	*1 15	*1 17	1 15
17	Londonderry ...	—	33/6 to 41/–	44/–	17 5	14 0	—	*1 16	—	1 5
19	Portadown	5 4	32/– to 38/–	38/–	16 0	16 0	16 0	—	—	1 12/6
21	Camlough	5 10	29/– to 35/–	40/–	17 0	15 10	14 0	*1 15	*1 17/6	—
21	Moneymore ...	6 2/6	37/9 to 45/–	37/6	17 5	15 0	15 15	*1 16/6	*1 18/9	1 10
22	Fintona	6 4/3	42/6 to 47/6	39/–	16 0	15 10	14 10	*2 0	*2 0	1 8
24	Antrim	—	43/–	39/–	21 10	19 0	—	—	—	1 10
25	Castlederg	5 10	42/– to 47/–	38/–	16 10	14 0	—	*2 0	*1 17/6	1 7/6
25	Killylea	—	30/– to 47/–	39/–	17 0	—	15 0	—	—	—
26	Ballymena	7 11/9	27/– to 41/–	—	22 0	21 0	20 10	—	—	1 10

* Downs and Cross. ‡ Long Wools. † Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:—Months of June, 1937, May, 1937, June, 1936; Six Months ended 30th June, 1937, and 30th June, 1936.

PORTS OF :—	CATTLE.						SHEEP.				PIGS.			
	Fat	Stores	Milch Cows	Springers.	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses
Belfast	2,768	7,491	1,576	359	20	12,214	63	—	8,984	9,047	10,800	—	10,800	531
Larne	16	3,482	—	7	—	3,505	—	—	3,737	3,737	3,304	240	3,544	21
Londonderry ...	54	9,520	19	108	633	10,334	220	—	4,126	4,346	1,186	—	1,186	20
Newry	7	182	1	14	—	204	—	—	46	46	1	—	1	—
Total, June, 1937 ...	2,845	20,675	1,596	488	653	26,257	283	—	16,893	17,176	15,291	240	15,531	572
Total, May, 1937 ...	3,502	22,673	1,231	226	756	28,388	411	—	7,234	7,645	15,396	334	15,730	580
Total, June, 1936 ...	5,027	12,891	1,660	316	987	20,881	22	—	25,425	25,447	3,615	57	3,672	789
Total, Six months ended 30th June, 1937 ...	34,957	112,315	7,015	1,071	3,382	158,740	17,798	—	24,785	42,583	75,416	1,646	77,062	1,956
Total, Six months ended 30th June, 1936 ...	43,289	91,219	6,785	853	11,969	154,115	6,284	—	36,072	42,356	23,845	345	24,190	3,205

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st May, 1937, and the five months ended 31st May, 1937, with comparative figures for the corresponding periods in 1936. This information also includes trade with the Irish Free State across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.				EXPORTS.			
	Month ended 31st May	Month ended 31st May	5 months ended 31st May	5 months ended 31st May	Month ended 31st May	Month ended 31st May	5 months ended 31st May	5 months ended 31st May
	1937	1936	1937	1936	1937	1936	1937	1936
Bacon ... ... cwt.	3,264	2,720	12,966	15,117	29,496	42,573	159,611	163,744
Hams ... ... cwt.	1,403	2,055	6,915	8,643	9,749	13,877	50,803	61,547
Pork ... ... cwt.	279	1,193	3,287	6,829	3,047	4,769	15,376	17,603
Butter ... ... cwt.	23,145	22,175	90,804	88,497	184	248	864	1,077
Eggs ... ... gt. hds.	154,606	206,196	481,691	682,171	476,583	653,021	1,380,379	1,606,407
Oat Products (inc. Oatmeal)cwt.	1,830	3,093	9,942	11,458	6,333	5,344	43,579	40,278
Potatoes ... ... tons	1,151	2,161	5,219	10,049	*20,246	*22,716	*127,138	*141,395
Poultry ... ... cwt.	197	237	1,771	2,493	10,124	10,422	94,571	92,071
Grass Seeds ... cwt.	1,097	868	6,274	6,426	29,949	55,775	217,381	264,205

* These figures represent the quantities of potatoes inspected for shipment by the Ministry of Agriculture.

There were no imports of oats direct from abroad in May, 1937, or in the corresponding month of last year.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 18 fairs in Northern Ireland during the months of June, 1936, and May and June, 1937.

Description of Live Stock.	June, 1936.		May, 1937.		June, 1937.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ...	8,452	5,604	6,117	5,220	6,713	5,570
Fat Cattle ...	1,235	1,019	904	818	868	793
Dairy Cattle ...	1,312	1,074	1,046	869	1,241	1,061
Sheep ...	511	333	280	266	339	269
Lambs ...	1,192	1,014	161	142	1,552	1,458
Young Pigs ...	3,821	3,134	3,078	2,476	3,736	2,700

Cattle offerings at fairs held during June included increased numbers of store and dairy animals and a slightly shorter supply of fats as compared with May, but, in general, the numbers of all cattle continued on the small side for the time of year. Trade for stores remained good and most of the animals were readily disposed of, although prices, in the main, tended easier on the month. Promising young bullocks and heifers were in most favour and good numbers were sold to cross-Channel buyers. Prices for good forward cattle were generally little altered. Fat cattle decreased in number at fairs and offerings were of small dimensions for June. The quality was mostly up to a fair average standard but a considerable proportion of the animals were lacking in finish. Trade continued on satisfactory lines although prices moved slightly downward throughout the month. Moderate sized offerings of dairy stock were chiefly made up of second and third quality animals, with a rather limited supply of good quality springers and young dairy cows. Good springers were an exceptionally sharp trade at recent high prices and there was also a good enquiry for nice young cows for the cross-Channel trade. The demand for secondary animals was moderately good at about late rates, but rough and bad uddered cattle were hard to sell and there was a tendency in some quarters to take advantage of the satisfactory rates ruling for beef to fatten off more of these than usual.

Supplies of sheep were medium for the time of year but lambs were rather more numerous. Good lambs were in strong request at remunerative rates and ewes with lambs at foot also sold well but other classes were a quiet trade.

Increased offerings of young pigs were in steady request and prices, where altered, moved in sellers' favour.

9th July, 1937.

This report will be sent free monthly as issued on application being made to the Secretary, Ministry of Agriculture, Stormont, Belfast.

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MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

No 1. Flax Seed, 1937.
" 2. Improvement of Farm Poultry.
" 3. Feeding for Egg Production.
" 4. Marketing of Eggs.
" 5. The Dishorning of Calves.
" 6. The Packing of Apples in Standard Boxes.
" 7. Potato Trials
" 8. Seed Testing for Farmers.
" 9. The Renovation of Orchards.
" 10. Fruit Tree Pests—Capsid Bugs.
" 11. Fruit Tree Pests—Aphides and Apple Sucker.
" 12. Fruit Tree Pests—Caterpillars
" 13 Contagious Abortion in Cattle
" 14. Cheese-making on the Farm.
" 15. Suitable Varieties of Fruit.
" 16. The Feeding of Dairy Cows.
" 17. Home Bottling of Fruits and Vegetables.
" 18. Marketing of Dead Poultry.
" 19. How to Feed Linseed.
" 20. The Hatching and Rearing of Chickens.
" 21. The Uses and Advantages of Portable Poultry Houses.
" 22. Leather-Jacket Grubs.
" 23. The Handling and Care of Wool.
" 24. Fluke in Sheep.
" 25. The Rearing and Management of Young Horses.
" 26. Ordnance Survey Maps for Farmers.
" 27. How to Keep Eggs Clean
" 28. The Construction of a Laying House for Poultry.
" 29. The Selection and Breeding of Laying Hens.
" 31. Coccidiosis in Poultry.
" 32. Roup of Poultry (Fowl Pox).
" 33. Spraying Calendar for Apple Orchards.
" 34. The Pruning of Apple Trees.
" 35 The Fattening of Pigs.
" 36. Advantages of Milk Recording.
" 37. The Raising and Fattening of Turkeys.
" 38. The Destruction of Charlock.
" 39. The Production of Clean Milk.
" 40. The Laying Down and Management of Temporary Pastures.
" 41. Blackleg, Blackquarter or Quarterill.
" 42. The Purchase of Balanced Rations for Dairy Cows.
" 43. Tuberculosis in Poultry.
No. 44. Results of Crop Experiments, 1936.
" 45. The Breeding and Rearing of Pigs.
" 46. Hints for Winter Egg Production.
" 47. The Care and Management of Sheep.
" 49. American Gooseberry Mildew.
" 50. Potato Blight.
" 51. Butter-making on the Farm.
" 52. Gapes in Chickens.
" 54 The Breeding and Rearing of Calves.
" 55. Destruction of Ragwort or Benweed.
" 56 Identification of Egg Supplies.
" 57. How to have Eggs of First Quality.
" 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
" 59. Bacillary White Diarrhoea (Pullorum Disease).
" 60. Advantages of Winter Agricultural Classes.
" 61. The Care and Management of Breeding Bulls.
" 62. The Production of Timber on the Farm.
" 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
" 64 The Destruction of Warble Fly Maggots in Cattle.
" 65. The Packing of Apples in Barrels
" 66. Seed Testing Facilities for Traders.
" 67. The Cultivation of Vegetables.
" 68. The Cultivation of Strawberries.
" 69. The Construction of Piggeries
" 70. Ringworm.
" 71. The Cultivation of Raspberries.
" 72. Tree Planting for Shelter and Ornament.
" 73. The Propagation and Maintenance of Healthy Stocks of Potatoes.
" 74. New Pure Strains of Flax.
" 75. Pig Production and the Pigs Marketing Scheme.
" 76. Acarine (Isle of Wight) Disease of Bees.
" 77. Licensing of Milk Producers and Distributors.
" 78. Graded Milk.
" 79. The Picking and Storing of Apples.
" 80. Hoose or Husk in Farm Stock.
" 81. The Construction of Cow Houses.
" 82 White Scour in Calves.
" 83. The Care, Management and Feeding of the Poultry Breeding Stock.

Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

No. 1. Phosphatic Fertilisers.
" 5. Why Pay a Tax on the Horns of Cattle ?
" 8. Basic Slag.
" 9. Smut in Oats.
" 10. Purchase of Fertilisers and Feeding Stuffs.
" 11. Fertilisers and Feeding Stuffs Act—General Summary.
" 12. The Treatment of Liver Fluke.
" 13. The Ox-Warble Fly
306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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